**Input file for finding the clusters ‘test\_case.txt'**

* It consists of three columns -> used for making the clusters (or, coalitions) by kmeans algorithm.
* The first line of **'test\_case.txt'** has to be res1,res2,res3 -> from the second line numerical values starts. -> copy the numerical values from **‘modifiedland\_vs\_resource\_X’** and paste it in **'test\_case.txt'**

**Run the Python script kmeans.py**

* After successfully making the clusters -> it will ask for the number of agents -> enter the number of agents and now it will find the final Coalition Structure value V(CS).
* To find the V(CS), kmeans needs **'land\_value\_shuffeled\_x.txt'**

**Connection between 'test\_case.txt' and 'land\_value\_shuffeled\_x.txt'?**

If the number of agents is **x=15,**

1. Then **‘test\_case.txt’** will contain **1+15** lines

(first line for res1,res2,res3, second line onward the 3 resource values of 15 agents)

1. **'land\_value\_shuffeled\_x.txt'** will contain 15 lines

Google Sheet link (to enter the values): https://docs.google.com/spreadsheets/d/1iI\_49UirMb7M95q2tRzB1yo875BMBKgsUTTEemn2HhY/edit?usp=sharing